

BRIEF NOTE

Fatoua villosa (Moraceae), Mulberry Weed, in Ohio¹

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ABSTRACT. *Fatoua villosa* (Thunb.) Nakai (Moraceae) is reported from Ohio, from outdoor sites in Butler, Franklin, and Washington counties, and from greenhouse sites in Athens, Butler, and Hamilton counties. The species was first found in the state in 1979, but has not previously been reported in floristic literature for Ohio. It probably entered the state through greenhouses and nursery stock from which it escaped into weedy areas and flower beds. It persists in outdoor situations in the state and is likely to become a common weedy species in Ohio. An illustration is included for the first time in North American botanical literature.

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INTRODUCTION

Fatoua villosa (Thunb.) Nakai, an herbaceous member of the Moraceae, was collected by the author in 1992 in Butler County, OH, in both greenhouse and outdoor sites. A search of herbaria in the state and vicinity revealed two previous collections of the species from Ohio, one from Hamilton County in 1979, and the other from Athens County in 1987, both of which were from greenhouses. It was subsequently collected in Washington and Franklin counties, both at outdoor sites. A list of specimens examined is included at the end of this report. Since the species is considered a potentially serious pest (Reed 1977), all previous literature reports for North America are compiled here, along with a description and an illustration of the species.

Fatoua villosa (Fig. 1) is an east Asian plant which was first reported for North America from Louisiana by Thieret (1964). Its Asian range includes Japan, Korea, China, Taiwan, Tonkin, Okinawa, and the Ryukyu Islands (Lee 1989, Reed 1977, Liu and Liao 1976, Walker 1976, Ohwi 1965), where it occurs as a weed in cultivated or grassy fields, along roadsides, and in open woods (Walker 1976, Ohwi 1965). New World reports include Louisiana (Massey 1975, Thieret 1964), Florida (Massey 1975, DuQuesnay 1974), Alabama (Massey 1975), Georgia (Massey 1975), Mississippi (Carter et al. 1990, Massey 1975), North Carolina (Massey 1975), Tennessee (Kral 1981), Oklahoma (Taylor and Taylor 1981), Texas (Lipscomb 1984), Arkansas (Sundell 1986), Virginia (Wright 1988), and Kentucky (Browne and Athey 1992). The species was also reported and illustrated from the Bahamas by Correll and Correll (1982). The common name "mulberry weed" is derived from the Japanese "kuwa-kusa" (Walker 1976).

Fatoua villosa is a monoecious annual herb, generally glandular-pubescent throughout, 10–80 cm tall, with simple or branched erect stems, white milky sap, and a strong oily odor. Leaves are alternate, (1–)5(–10) cm long x (1–)4(–8)

cm broad, serrate to crenate, broadly ovate, truncate to cordate at the base, acute to acuminate at the apex, slightly rough above and below, with deciduous stipules. The minute unisexual flowers have a 4-merous perianth; staminate and pistillate flowers occur on broadly expanded receptacles in the same axillary inflorescences. Staminate flowers contain four exerted stamens which are positioned opposite the perianth lobes, while pistillate flowers contain a unilocular pistil with a lateral style bearing a pubescent filiform stigma. The fruit is a one-seeded, rugose achene 0.8 mm long. Chromosome numbers of $n = 13$ and $2n = 26$ have been reported for the species (Li 1986, Kondo and Miller 1973). Flowering in Ohio occurs outdoors in August to October, while greenhouse populations may flower throughout the fall, winter, and into the early spring.

Indoor populations in the state have persisted for several years. The oldest known specimen for the state was collected by J. Thieret in 1979 in the Krohn Conservatory in Cincinnati, where it has continued to be a bad weed (J. Kapela, pers. comm.). It was subsequently collected by Thieret in a greenhouse in Athens in 1987. In Butler County, the plant has been observed by greenhouse personnel for at least four years (J. Keegan, pers. comm.; D. D. Taylor, pers. comm.).

The first report of an outdoor site of the species was in 1991 by Marilyn Ortt (pers. comm.), who reported an unknown weed at a nursery in Marietta, where it was found again in 1992 (A. W. Cusick, pers. comm.). Other outdoor sites were discovered in Butler and Franklin counties in 1992. *Fatoua villosa* will undoubtedly persist and spread in the state as it has already done in the southeastern United States (e.g., Kentucky: J. Thieret pers. comm.; D. D. Taylor, pers. comm.), especially since it is native to temperate regions of Asia where the climate is similar to that of Ohio. As has been reported previously for other regions (Massey 1975), introduction into Ohio apparently occurred by means of nursery stock and potted plants.

Specimens examined (herbarium abbreviations according to Holmgren et al. 1990): **OHIO: Athens County:** Athens, weed in greenhouse, 15 Mar. 1987, J. W. Thieret 56353 (KNK). **Butler County:** Oxford, Miami

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FIGURE 1. *Fatoua villosa* in the Conrad Formal Gardens, Miami University (Vincent 5693). Bar = 4 cm.

University campus, weed in Upham Hall greenhouse, 23 Sept. 1992, *M. A. Vincent* 5692 (MU, OS); weed in Conrad Formal Gardens, 24 Sept. 1992, *M. A. Vincent* 5693 (MU, OS, KE, BHO, F, NY, MO, US, USF, BGSU, CINC, MICH, CLM), same location, 2 Aug. 1993, *M. A. Vincent* 6299 (MU); Oxford Twp., weed in E. Belk Greenhouse, Boyd Hall, Western College Campus, Miami University, 26 Oct. 1992, *M. A. Vincent* 5775 (MU, KNK, OSH). **Franklin County:** Columbus, weed in garden at AmeriFlora site, Franklin Park, 4 Oct. 1992, *A. W. Cusick* 30637 and *C. J.*

Shelton (MU, OS). **Hamilton County:** Cincinnati, weed in greenhouse at Krohn Conservatory, 16 Aug. 1979, *J. W. Thieret* 51174 (KNK), same location, 18 Mar. 1993, *M. A. Vincent* 5786 and *J. Kapela* (MU). **Washington County:** Marietta, in lath house of nursery along Muskingum River, 30 Sept. 1992, *A. W. Cusick* 30632 and *M. Ortt* (MU) [site discovered by *M. Ortt* in 1991].

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